

---

# International Journal of Advanced Research in Biological Sciences

ISSN : 2348-8069

www.ijarbs.com

---

## Research Article



### Entomological survey on dusky cotton bug in standing cotton crop

Shahid Hussain<sup>1\*</sup>, Ijaz Ahmad<sup>2</sup>, Rahat Hussain Rashid<sup>3</sup>, Mazher Farid Iqbal<sup>4</sup> and Faryad Hussain<sup>5</sup>

Pest Warning and Quality Control of Pesticides, Bahawalpur<sup>1</sup>, Taunsa<sup>2</sup>, Rajan Pur<sup>3</sup>

Adaptive Research Station, Sialkot<sup>4</sup>

Directorate General Agriculture (Ext. & A. R.) Punjab-Lahore<sup>5</sup>

\*Corresponding author

---

#### Abstract

An entomological survey on pest scouting of dusky cotton bug in cotton field was conducted to evaluate month-wise comparison of area of above and Below Economic Injury Level (AEIL and BEIL) in District Bahawalpur during 2012-2014. The area of Above Economic Injury Level of dusky cotton bug was recorded 0%; 0.28%; 0.08%; 0%; 0.12%; 1.03% however 10.1%; 4.36%; 6.07%; 3.1%; 2.32% and 5.86% area was infested Below Economic Injury Level during May-October 2014. The area of Above Economic Injury Level of dusky cotton bug was recorded 0.76%; 1.02%; 0.02%; 0.04%; 0% and 0.23% however 6.4%; 5.44%; 4.36%; 1.19%; 0.59%; 1.17% area was infested Below Economic Injury Level during May-October 2013. The infested area of Above Economic Injury Level of dusky cotton bug was recorded 0.11%; 0.06%; 0.06%; 0%; 0.47% and 0.92% however 5.05%; 1.96%; 3.16%; 0.66%; 2.05% and 4.69% area was infested Below Economic Injury Level during May-October 2012. At the end it was concluded that the population trend of dusky cotton bug was recorded at minimum level in August and September. However the farmers are advised to be vigilant in these months to overcome the problem of this pest.

**Keywords:** Pest; Scouting; Cotton; Dusky; Bug; Survey; Southern; Punjab; Pakistan

---

#### Introduction

**Cotton** (*Gossypium hirsutum* L.) is cash crop popularly known as silver fiber and “white gold” in Pakistan (Hakim et al., 2011). It is a back bone of country; considered 4<sup>th</sup> largest producer and 3<sup>rd</sup> largest consumer throughout the world (Zeeshan et al., 2010). It contributes a huge share in the foreign exchange earnings of the country (Ahmad et al., 2011). Due to attack of pest complex recorded in cotton crop, maximum quantities of pesticides were sprayed to break out the life cycle. The crop was lost upto 30-40% by the attack of Insect Pest (Huque, 1972). Newly introduced insecticides found to be effected against pests than conventional insecticides (Razaq, 2005). Modes of action of newly introduced insecticides were important for the management of attack. These insecticides having fast and quick action and comparatively cheaper among conventional

insecticides and proved less persistence and toxic (Anjan et al., 2009). Dusky cotton bug is a serious pest of cotton and feeds on the cotton seeds. It is commonly referred to as the cotton seed bug; this species was described from Italy by Costa in 1847 Baranowski and Slater, (2005) reported it from the Turkish and Caicos, Bahamas; Cayman Island and Hispaniola. Therefore the study had been planned to evaluate month-wise area of entomological survey on pest scouting of dusky cotton bug in cotton field in District Bahawalpur during 2012-2014.

#### Materials and Methods

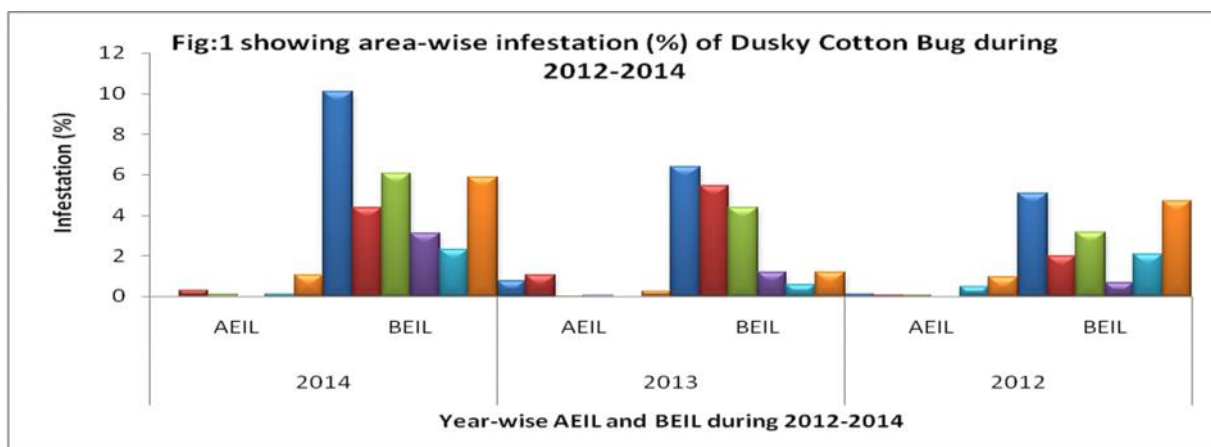
An entomological survey on pest scouting of dusky cotton bug cotton field was conducted to evaluate month-wise comparison of spots of Above and Below

Economic Injury Level (AEIL and BEIL) in District Bahawalpur during 2012-2014. The entire District was divided into small pockets and pest scouting was done by Mario Method, however pest scouting was done at morning and evening time (Shah et. al., 2015). The attack was recorded from three upper, middle and lower portions of leaves from randomly selected plant then taken its average. The above and below EIL of this pest was recorded by selection of total spots divided by total surveyed area and made its percentage. The data of this pest was recorded month-wise throughout the season.

## Results and Discussion

From Fig-1 showing the area of Above Economic Injury Level of dusky cotton bug was recorded 0%;

0.28%; 0.08%; 0%; 0.12%; 1.03% however 10.1%; 4.36%; 6.07%; 3.1%; 2.32% and 5.86% area was infested Below Economic Injury Level during May-October 2014. The area of Above Economic Injury Level of dusky cotton bug was recorded 0.76%; 1.02%; 0.02%; 0.04%; 0% and 0.23% however 6.4%; 5.44%; 4.36%; 1.19%; 0.59%; 1.17% area was infested Below Economic Injury Level during May-October 2013. The infested area of Above Economic Injury Level of dusky cotton bug was recorded 0.11%; 0.06%; 0.06%; 0%; 0.47% and 0.92% however 5.05%; 1.96%; 3.16%; 0.66%; 2.05% and 4.69% area was infested Below Economic Injury Level during May-October 2012. Non selective use of pesticides leads to water pollution, soil degradation, pest resistance and resurgence and ozone depletion (Naeem et al., 2012).



## Conclusion

At the end it was concluded that the population trend of dusky cotton bug was recorded at minimum level in August and September. However the farmers are advised to be vigilant in these months to overcome the problem of dusky cotton bug.

## References

- Ahmad, N., Khan, M. H., Khan, G. Z., and Tofique, M. 2011. Provision of supplemental food for the conservation of beneficial insects in cotton field. Pak. Ento. 26(2):95-100.
- Anjan, B., Suhrid, R. B., and Pritam, G. 2009. New pesticides molecules formulation technology and

uses. Present status and future challenges. J. Plant Prot. Sci., 1(1): 9-15.

- Hakim, A. S., Lanjar, A. G., Ashfaq, A. M., Khajjak, A. S., and Bhugro, M. 2011. Seasonal occurrence of *Phenacoccus solenopsis* Tinsley (Hemiptera: Pseudococcidae) and its natural enemies on different varieties of cotton crop. Pak. J. Ento. 26(1):17-24.
- Huque, H., 1972. Cotton Entomology: In Cotton in Pakistan Center cotton Commit. Karachi. pp 183-238.
- Naeem, M., Farid, A., Khan, M. H., and Ali, S. K. 2012. Laboratory studies on the comparative effect of neem oil (*Azadirachta indica*) and insecticides on *Trichogramma chilonis* (Ishii). Pak. J. Ento. 27(1):33-38.

- Shah, M., Nawaz, A., Tabassam, I. R., Tariq, M., Ahmad, M., Iqbal, M. F. and Iqbal, Z. 2015. Entomological survey of sucking insect pest of cotton in District Bahawalpur. *Int. J. Adv. Res. Biol. Sci.* 2(3):267-269.
- Slater, J. A. and Baranowski, R. M. 1994. The occurrence of *Oxycarenum hyalinipennis*(Costa) (Hemiptera:Lygaeidae) in the West Indies and new Lygaeidae records for the Turks and Caicos Island of Providenciales and North Caicos. *Florida, Ento.* 77:495-497.
- Zeeshan A., Khan, T. M., and Noorka, I. R. 2010. Detail analysis to determine gene action for lint (%) and fiber traits in upland cotton. *Int. J. Agri. Appl. Sci.* 2(1):11-14.